

IN THE CLAIMS:

1.-36. (Cancelled)

37. (Previously Presented) A program receiver for displaying a graphical-interactive picture by receiving a program transmitted from a program transmitter, said program receiver
5 comprising:

signal receipt means for receiving a signal transmitted from said program transmitter, said signal being a multiplex signal including a program and data specifying a structure of the graphical interactive picture;

10 signal separation means for separating the signal received by said signal receipt means into a program signal and a graphical-interactive-picture-structure specification data signal;

first graphical interactive picture generation means for generating the graphical interactive picture based on the graphical-interactive-picture-structure specification data signal from said signal separation means; and

15 display means for displaying the graphical interactive picture generated by said first graphical interactive picture generation means.

38. (Previously Presented) The program receiver of Claim 37 further comprising:

storage means for storing a plurality of basic picture elements in advance, said plurality of basic picture elements being figures composing the graphical interactive picture
20 manipulated by a user and said basic picture elements being identified by identifiers; and

first graphical interactive picture generating means for generating the graphical interactive picture by combining the basic picture elements stored in said storage means.

39. (Previously Presented) The program receiver of Claim 38 further comprising:

interactive manipulation means for inputting manipulation to the graphical interactive picture displayed by said display means;

basic action storage means for storing a content of an action for updating the graphical interactive-picture-structure specification data; and

second graphical interactive picture generation means for retrieving the content of the action from said basic action storage means based on action information directing an update of the graphical interactive picture upon receipt of the input manipulation from said interactive manipulation means to update the graphical-interactive-picture-structure specification data to generate an updated graphical interactive picture.

40. (Previously Presented) The program receiver of Claim 39, wherein said first graphical interactive picture generation means includes:

a receipt decode unit for receiving the graphical interactive-picture-structure specification data signal from said signal separation means to decode the same:

a storage unit for storing decoded graphical interactive-picture-structure specification data from said receipt decode unit, the graphical interactive-picture-structure specification data being composed of a panel object definition including a plurality of pieces of panel object information, an action definition including a plurality of pieces of action information, and a shape definition including a plurality of pieces of shape information;

a first process unit for retrieving the graphical interactive-picture-structure specification data from said storage unit, extracting the basic picture elements corresponding to the identifier by referring to the shape information from said storage unit in accordance with the

retrieved graphical-interactive-picture-structure specification data, and for placing the extracted basic picture elements by referring to the panel object information; and

a first display control unit for controlling the display means to display the basic picture elements placed by said first process unit as the graphical interactive picture.

5 41. (Previously Presented) The program receiver of Claim 40 wherein said interactive manipulation means includes:

an input manipulation acceptance unit for accepting a user's input manipulation to the graphical interactive picture; and

an interactive signal transmission unit for transmitting the input manipulation
10 accepted by said manipulation acceptance unit to said second graphical interactive picture generation unit as an interactive signal; and

wherein said second graphical interactive picture generation means includes:

an interactive signal receipt unit for receiving the interactive signal from said interactive signal transmission unit;

15 an interactive signal interpretation unit for interpreting the interactive signal receipt unit; a graphical-interactive-picture-structure specification data update unit for retrieving a content of an action from said basic action storage means in accordance with the interactive signal interpreted by said interactive signal interpretation unit to update the graphical-interactive picture-structure specification data in said storage unit;

20 a second process unit for retrieving updated graphical-interactive-picture structure specification data from said storage unit and for extracting the basic picture elements

corresponding to the identifier from said storage means to place the extracted display elements;
and

a second display control unit for controlling said display means to display the
basic picture elements placed by said second process unit as an updated graphical interactive
5 picture.

42. (Previously Presented) The program receiver of Claim 41 further comprising
information transmission means for transmitting the data of the graphical interactive picture
updated by said interactive manipulation means to said program transmitter.

43. (Previously Presented) The program receiver of Claim 40 further comprising
10 information transmission means for transmitting the data of the graphical interactive picture
updated by said interactive manipulation means to said program transmitter.

44. (Currently Amended) The program receiver of Claim 40 further comprising
information record means for outputting data related to the graphical interactive picture as per
manipulation [[form]] from said interactive manipulation means to make a record thereof.

15 45. (Currently Amended) The program receiver of Claim 39 further comprising
information record means for outputting data related to the graphical interactive picture as per
manipulation [[form]] from said interactive manipulation means to make a record thereof.

46. (Previously Presented) The program receiver of Claim 40, wherein said
graphical-interactive picture-structure specification data further includes a class definition
20 including a plurality of pieces of class attribute information.

47. (Previously Presented) The program receiver of Claim 37 further comprising:

interactive manipulation means for inputting manipulation to the graphical interactive picture displayed by said display means;

5 basic action storage means for storing a content of an action for updating the graphical interactive-picture-structure specification data; and

second graphical interactive picture generation means for retrieving the content of the action from said basic action storage means based on action information directing an update of the graphical interactive picture upon receipt of the input manipulation from said interactive manipulation means to update the graphical-interactive-picture-structure specification data to
10 generate an updated graphical interactive picture.

48. (Previously Presented) A method of synthesizing a menu comprising the steps of:

a menu information receiving step for receiving a plurality of menu information from a plurality of appliances; and

a menu synthesizing step for synthesizing the plurality of menu information
15 received by the menu information receiving step in accordance with a synthesizing rule.

49. (New) A program receiver for displaying a graphical-interactive picture by receiving a program transmitted from a program transmitter, said program receiver comprising:

a signal receipt unit operable to receive a signal transmitted from said program transmitter, said signal being a multiplex signal including a program and data specifying a
20 structure of the graphical interactive picture;

a signal separation unit operable to separate the signal received by said signal receipt unit into a program signal and a graphical-interactive-picture-structure specification data signal;

5 a first graphical interactive picture generation unit operable to generate the graphical interactive picture based on the graphical-interactive-picture-structure specification data signal from said signal separation unit; and

a display unit operable to display the graphical interactive picture generated by said first graphical interactive picture generation unit.

50. (New) The program receiver of Claim 49 further comprising:

10 a storage unit operable to store a plurality of basic picture elements in advance, said plurality of basic picture elements being figures composing the graphical interactive picture manipulated by a user and said basic picture elements being identified by identifiers; and

a first graphical interactive picture unit operable to generate the graphical interactive picture by combining the basic picture elements stored in said storage unit.

15 51. (New) The program receiver of Claim 50 further comprising:

an interactive manipulation unit operable to input a manipulation to the graphical interactive picture displayed by said display unit;

a basic action storage unit operable to store content of an action for updating the graphical interactive-picture-structure specification data; and

20 a second graphical interactive picture generation unit operable to retrieve the content of the action from said basic action storage unit based on action information directing an update of the graphical interactive picture upon receipt of the input manipulation from said

interactive manipulation unit to update the graphical-interactive-picture-structure specification data to generate an updated graphical interactive picture.

52. (New) The program receiver of Claim 51, wherein said first graphical interactive picture generation unit includes:

5 a receipt decode unit operable to receive the graphical interactive-picture-structure specification data signal from said signal separation means to decode the same:

a storage unit operable to store decoded graphical interactive-picture-structure specification data from said receipt decode unit, the graphical interactive-picture-structure specification data being composed of a panel object definition including a plurality of pieces of
10 panel object information, an action definition including a plurality of pieces of action information, and a shape definition including a plurality of pieces of shape information;

a first process unit operable to retrieve the graphical interactive-picture-structure specification data from said storage unit, extracting the basic picture elements corresponding to the identifier by referring to the shape information from said storage unit in accordance with the
15 retrieved graphical-interactive-picture-structure specification data, and for placing the extracted basic picture elements by referring to the panel object information; and

a first display control unit operable to control the display unit to display the basic picture elements placed by said first process unit as the graphical interactive picture.

53. (New) The program receiver of Claim 52 wherein said interactive manipulation
20 unit includes:

an input manipulation acceptance unit operable to accept a user's input manipulation to the graphical interactive picture; and

an interactive signal transmission unit operable to transmit the input manipulation accepted by said manipulation acceptance unit to said second graphical interactive picture generation unit as an interactive signal; and

wherein said second graphical interactive picture generation means includes:

5 an interactive signal receipt unit operable to receive the interactive signal from said interactive signal transmission unit;

an interactive signal interpretation unit operable to interpret the interactive signal receipt unit; a graphical-interactive-picture-structure specification data update unit for retrieving a content of an action from said basic action storage means in accordance with the interactive
10 signal interpreted by said interactive signal interpretation unit to update the graphical-interactive picture-structure specification data in said storage unit;

a second process unit operable to retrieve updated graphical-interactive-picture structure specification data from said storage unit and for extracting the basic picture elements corresponding to the identifier from said storage means to place the extracted display elements;
15 and

a second display control unit operable to control said display unit to display the basic picture elements placed by said second process unit as an updated graphical interactive picture.

54. (New) The program receiver of Claim 53 further comprising an information
20 transmission unit operable to transmit the data of the graphical interactive picture updated by said interactive manipulation unit to said program transmitter.

55. (New) The program receiver of Claim 52 further comprising an information transmission unit operable to transmit the data of the graphical interactive picture updated by said interactive manipulation unit to said program transmitter.

56. (New) The program receiver of Claim 52 further comprising an information
5 record unit operable to output data related to the graphical interactive picture as per manipulation from said interactive manipulation unit to make a record thereof.

57. (New) The program receiver of Claim 51 further comprising an information record unit operable to output data related to the graphical interactive picture as per manipulation from said interactive manipulation unit to make a record thereof.

10 58. (New) The program receiver of Claim 52, wherein said graphical-interactive picture-structure specification data further includes a class definition including a plurality of pieces of class attribute information.

59. (New) The program receiver of Claim 49 further comprising:
an interactive manipulation unit operable to input a manipulation to the graphical
15 interactive picture displayed by said display unit;

a basic action storage unit operable to store content of an action for updating the graphical interactive-picture-structure specification data; and

a second graphical interactive picture generation unit operable to retrieve the content of the action from said basic action storage unit based on action information directing an
20 update of the graphical interactive picture upon receipt of the input manipulation from said

interactive manipulation unit to update the graphical-interactive-picture-structure specification data to generate an updated graphical interactive picture.